

LONDON- WEST MIDLANDS ENVIRONMENTAL STATEMENT

Volume 5 | Technical Appendices

CFA3 | Primrose Hill to Kilburn (Camden)

Baseline (SV-002-003)

Sound, noise and vibration

November 2013

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Department for Transport

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1 Introduction

1.1 Structure of the sound, noise and vibration appendices

- 1.1.1 The sound, noise and vibration appendices comprise four sections. The first of these is an introduction to the relevant policy and methodology (Volume 5: Appendix SV-001-000). This relates to the sound, noise and vibration assessment for all community forum areas (CFA).
- 1.1.2 For the Primrose Hill to Kilburn (Camden) area, the other three sections are as follows:
- baseline sound, noise and vibration (Volume 5: Appendix SV-002-003) (this appendix);
 - construction sound, noise and vibration (Volume 5: Appendix SV-003-003); and
 - operational sound, noise and vibration (Volume 5: Appendix SV-004-003).
- 1.1.3 Maps referred to within this appendix are contained in the Volume 5, Sound, Noise and Vibration Map Book.
- 1.1.4 This appendix includes details of the existing and future baseline sound environment within the area. It provides details of measurements and any other data collection which has been undertaken in order to obtain existing and future baseline sound levels.

1.2 Existing acoustic environment

- 1.2.1 The existing baseline sound environment for the Primrose Hill to Kilburn (Camden) area is generally urban in character - typically being dominated by transportation sources, including road and rail traffic.
- 1.2.2 In the area around the Adelaide Road vent shaft the baseline sound environment is dominated by road traffic on the B509 Adelaide Road and other surrounding roads typically 70dB¹ along B509 Adelaide road reducing to 55dB in locations screened from the major roads. Other sound sources include traffic on other surrounding roads, trains running on nearby and more distant rail lines and localised commercial and domestic activities.
- 1.2.3 In the area surrounding the Alexandra Place vent shaft the dominant sound source is traffic on the surrounding roads typically 55dB. Sound from trains on the nearby rail lines is also intermittently audible in the area.
- 1.2.4 Noise levels are lower at night as traffic reduces typically reducing by 10dB² in locations near major roads and 5dB in locations screened from the roads.

¹ Quoted dB values at residential areas refer to the free-field 16 hour daytime (07:00 to 23:00) equivalent continuous sound pressure level, $L_{pAeq,16hr}$.

² Night-time sound levels refer to the free-field 8 hour night-time (23:00 to 07:00) equivalent continuous sound pressure level, $L_{pAeq,8hr}$.

2 Scope, assumptions and limitations

2.1 Sound and vibration sensitive receptors

2.1.1 Within the Primrose Hill to Kilburn (Camden) area, 158 assessment locations have been defined to represent all identified sound and vibration sensitive receptors within the spatial scope. The assessment locations are shown on the Map Series SV-03 and SV-04 (Volume 5, Sound, Noise and Vibration Map Book). Within this area, the following types of sound and vibration sensitive receptors have been identified:

- residential areas;
- education facilities;
- community centres and meeting facilities;
- places of worship;
- healthcare facilities; and
- offices and similar commercial premises.

2.2 Local engagement

- 2.2.1 Discussions have been held with representatives of London Borough of Camden regarding the approach which has been taken to baseline monitoring within this area, the identification of noise and vibration sensitive receptors, the selection of assessment location and baseline sound levels at these assessment locations.
- 2.2.2 Changes suggested during these meetings have influenced the assessment locations used and the monitoring undertaken and reported in this document.
- 2.2.3 Representatives of the London Borough of Camden have been invited to attend baseline sound measurements and witness the measurement procedures used in the Council's district, however, no council officers have been able to attend any of these invitations.
- 2.2.4 Local engagement through community forum meetings and other community groups e.g. Camden Cutting, has also provided the opportunity for local groups to suggest appropriate baseline sound monitoring locations. Any suggestions received from these groups have been considered and have influenced the monitoring undertaken and reported in this document.

2.3 Existing baseline sound monitoring locations

- 2.3.1 Because the route is within a tunnel throughout this CFA the only potential sources of airborne sound are the two vent shafts in the area.
- 2.3.2 As described in the Scope and Methodology Report (SMR) for the ES (Volume 5: Appendix CT-001-000/1), the sound from static sources such as vent shafts will be evaluated against a design target based on comparing the rating noise level against

background noise levels following the principles set out in BS4142³. Experience of analogous projects involving extensive tunnelling with multiple vent shafts such as HS1 and Crossrail shows that it is feasible to engineer and manage the operation of vent shafts to meet such a design target in rural, sub-urban and urban locations.

- 2.3.3 However, the noise output of the plant that will be used at each vent shaft will vary from shaft to shaft and will generally not be known until after the ES phase, at the detailed design stage. Consequently, the specification of the acoustic design target referred to above via an undertaking to Parliament will avoid significant effects.
- 2.3.4 As a result, the baseline noise measurements reported in regard to vent shafts are primarily intended to inform the construction airborne sound assessment.
- 2.3.5 Maps showing the baseline sound monitoring locations and assessment locations within this area are included in Map Series SV-03 and SV-04 (Volume 5, Sound, Noise and Vibration Map Book).

³ British Standards Institute (BSi) (1997), *BS4142 Method for rating industrial noise affecting mixed residential and industrial areas*, BSi.

3 Environmental baseline

3.1 Existing baseline data collection methodology

- 3.1.1 The overall approach to baseline data collection for sound noise and vibration is described in Volume 5: Appendix SV-001-000.
- 3.1.2 Over the Primrose Hill to Kilburn (Camden) area, a large number of baseline sound measurements have been undertaken. These have been classified as follows:
- long-term measurements – unattended measurements of several days duration;
 - medium-term measurements – attended measurements of several hours duration (generally repeated at different times of day); and
 - short-term measurements – attended measurements typically of 30 minutes duration (generally repeated at different times of day).
- 3.1.3 The Proposed Scheme is entirely in tunnel in this area and therefore the baseline sound measurements have been focused around the two vent shafts between Primrose Hill and Kilburn.
- 3.1.4 In this CFA a total of 6 baseline sound level measurements have been undertaken.
- 3.1.5 In the area of Primrose Hill, one long-term and four short-term measurements were undertaken.
- 3.1.6 A single short-term measurement in South Hampstead was undertaken near to the Alexandra Place vent shaft location.

3.2 Existing baseline sound levels

- 3.2.1 From the measurements described in Section 3.1, baseline sound levels have been ascertained for each assessment location within this area. These levels are presented in terms of the following key sound indicators:
- For the operational sound assessment
 - $L_{pAeq,16hr}$ weekday daytime (07:00-23:00) sound pressure level;
 - $L_{pAeq,8hr}$ weekday night-time (23:00-07:00) sound pressure level;
 - arithmetic average of $L_{pAFmax,5min}$ night-time sound pressure level; and
 - highest $L_{pAFmax,5min}$ night-time sound pressure level.
 - For the construction sound assessment
 - daytime L_{pAeq} sound pressure level (Monday to Friday 07:00-19:00; Saturday 07:00-13:00);
 - evening/weekend L_{pAeq} sound pressure level (Monday to Friday 19:00-23:00;

Saturday 13:00- 23:00; Sunday 07:00 to 23:00); and

- night-time L_{pAeq} sound pressure level (Monday to Sunday 23:00-07:00).

- 3.2.2 These values are presented in Table 1. The data source coding included within this table details how the baseline sound levels allocated to each assessment location have been derived. This coding is summarised in Table 2 and explained in detail in Volume 5: Appendix SV-001-000.
- 3.2.3 As part of the assessment process, after the completion of the baseline sound survey, additional assessment locations were identified as part of the construction assessment. In order to minimise the risk of over estimating the baseline sound conditions at these additional assessment locations, the selected levels allocated were based on the lowest survey results measured within Camden Town and HS1 Link area (CFA2), the Primrose Hill to Kilburn (Camden) area and the Kilburn (Brent) to Old Oak Common area (CFA4). In Table 1 these are referred to as "precautionary construction". In a limited number of situations, where these 'precautionary' (low) baseline sound levels has led to the unrealistic identification of effects, further analysis has been undertaken and appropriate baseline sound levels allocated.

Appendix SV-002-003

Table 1: Existing baseline sound levels

Assessment location ID	Area Represented	Measurement location	Existing baseline sound level (dB)							Data source coding
			For operational sound assessment				For construction sound assessment			
			Daytime L _{pAeq,16hr}	Night-time L _{pAeq,8hr}	Arithmetic average of night-time L _{pAFmax,5min}	Highest night-time L _{pAFmax,5min}	Daytime L _{pAeq}	Evening/weekend L _{pAeq}	Night-time L _{pAeq}	
700001	Gloucester Avenue, London	LM0079	61.2	57.7	68.5	83.5	61.1	59.2	56.2	3,A,ii,b
700002	Dumpton Place, London	LM0079	54.2	50.7	68.5	83.5	54.1	52.2	49.9	3,C,ii,b
700034	Chalk Farm Road, London	LM0075	72.3	70.6	77.2	90.5	72.2	70.5	69.1	3,A,ii,b
700060	Bridge Approach, London	LM0079	61.2	57.7	68.5	83.5	61.1	59.2	56.2	3,A,ii,b
700061	Adelaide Road, London	LM0079	56.2	52.7	68.5	83.5	56.1	54.2	51.2	3,B,iii,b
700063	Adelaide Road, London	LM1312	70.2	66.7	74.6	89.6	70.0	68.2	65.2	3,A,iii,b
700064	Adelaide Road, London	LM1317	59.4	56.0	68.0	83.0	59.4	57.4	54.4	3,A,ii,b
700065	Regents Park Road, London	LM1317	59.4	56.0	68.0	83.0	59.4	57.4	54.4	3,A,ii,b
700066	Adelaide Road, Haverstock	LM1312	70.2	66.7	74.6	89.6	70.0	68.2	65.2	3,A,iii,b
700067	Provost Road, London	LM1317	59.4	56.0	68.0	83.0	59.4	57.4	54.4	3,A,iii,b
700068	Eton College Road, Haverstock	LM1317	59.4	56.0	68.0	83.0	59.4	57.4	54.4	3,A,iii,b
700070	Haverstock Hill, London	LM0075	72.3	70.6	77.2	90.5	72.2	70.5	69.1	3,A,iii,b
700071	Haverstock Hill, London	LM0075	72.3	70.6	77.2	90.5	72.2	70.5	69.1	3,A,iii,b
700076	Chalk Farm Road, London	LM0075	72.3	70.6	77.2	90.5	72.2	70.5	69.1	3,A,iii,b
700077	Prince Of Wales Road, London	LM1317	59.4	56.0	68.0	83.0	59.4	57.4	54.4	3,A,iii,b

Assessment location ID	Area Represented	Measurement location	Existing baseline sound level (dB)							Data source coding
			For operational sound assessment				For construction sound assessment			
			Daytime L _{pAeq,16hr}	Night-time L _{pAeq,8hr}	Arithmetic average of night-time L _{pAFmax,5min}	Highest night-time L _{pAFmax,5min}	Daytime L _{pAeq}	Evening/weekend L _{pAeq}	Night-time L _{pAeq}	
700078	Malden Road, London	LM1317	59.4	56.0	68.0	83.0	59.4	57.4	54.4	3,A,iii,b
700080	Malden Crescent, London	LM1317	59.4	56.0	68.0	83.0	59.4	57.4	54.4	3,A,iii,b
700081	Belmont Street, London	LM1317	59.4	56.0	68.0	83.0	59.4	57.4	54.4	3,A,iii,b
700082	Chalk Farm Road, London	LM0075	72.3	70.6	77.2	90.5	72.2	70.5	69.1	3,A,ii,b
700084	Ferdinand Street, London	LM1317	59.4	56.0	68.0	83.0	59.4	57.4	54.4	3,A,iii,b
700086	Clarence Way, London	LM0063	59.4	57.7	66.9	80.3	59.3	57.6	56.2	1,A,iii,b
700088	Harmood Street, London	LM1317	59.4	56.0	68.0	83.0	59.4	57.4	54.4	3,A,iii,b
700090	Harmood Street, London	LM1317	59.4	56.0	68.0	83.0	59.4	57.4	54.4	3,A,iii,b
700093	King Henrys Road, London	LM0082	61.6	58.1	68.7	83.7	61.4	59.5	56.5	3,A,ii,b
700094	King Henrys Road, London	LM0082	61.6	58.1	68.7	83.7	61.4	59.5	56.5	3,A,ii,b
700095	King Henrys Road, London	LM0082	61.6	58.1	68.7	83.7	61.4	59.5	56.5	3,A,ii,b
700097	Berkley Road, London	LM0083	57.1	53.6	67.9	82.9	57.0	55.1	52.1	3,A,iii,b
700098	Ainger Road, London	LM0083	57.1	53.6	67.9	82.9	57.0	55.1	52.1	3,A,iii,b
700102	Regents Park Road, London	LM0079	61.2	57.7	68.5	83.5	61.1	59.2	56.2	3,A,ii,b
700103	Regents Park Road, London	LM0083	57.1	53.6	67.9	82.9	57.0	55.1	52.1	3,A,iii,b
700104	Regents Park Road, London	LM0083	57.1	53.6	67.9	82.9	57.0	55.1	52.1	3,A,iii,b

Assessment location ID	Area Represented	Measurement location	Existing baseline sound level (dB)							Data source coding
			For operational sound assessment				For construction sound assessment			
			Daytime L _{pAeq,16hr}	Night-time L _{pAeq,8hr}	Arithmetic average of night-time L _{pAFmax,5min}	Highest night-time L _{pAFmax,5min}	Daytime L _{pAeq}	Evening/weekend L _{pAeq}	Night-time L _{pAeq}	
700105	Regents Park Road, London	LM0083	57.1	53.6	67.9	82.9	57.0	55.1	52.1	3,A,iii,b
700106	Gloucester Avenue, London	LM0083	57.1	53.6	67.9	82.9	57.0	55.1	52.1	3,A,iii,b
700107	Gloucester Avenue, London	LM0083	57.1	53.6	67.9	82.9	57.0	55.1	52.1	3,A,i,a
700110	Gloucester Avenue, London	LM0083	57.1	53.6	67.9	82.9	57.0	55.1	52.1	3,A,iii,b
700112	Gloucester Avenue, London	LM0083	57.1	53.6	67.9	82.9	57.0	55.1	52.1	3,A,iii,b
700113	Chalcot Road, London	LM0083	57.1	53.6	67.9	82.9	57.0	55.1	52.1	3,A,iii,b
700116	Sunny Mews, London	LM0079	61.2	57.7	68.5	83.5	61.1	59.2	56.2	3,A,ii,b
700117	Gloucester Avenue, London	LM0079	61.2	57.7	68.5	83.5	61.1	59.2	56.2	3,A,iii,b
700118	Gloucester Avenue, London	LM0079	61.2	57.7	68.5	83.5	61.1	59.2	56.2	3,A,iii,b
700119	Waterside Place, London	LM0083	57.1	53.6	67.9	82.9	57.0	55.1	52.1	3,A,iii,b
700123	Princess Road, London	LM0083	57.1	53.6	67.9	82.9	57.0	55.1	52.1	3,A,iii,b
700124	Princess Road, London	LM0083	57.1	53.6	67.9	82.9	57.0	55.1	52.1	3,A,iii,b
700125	Gloucester Avenue, London	LM0079	61.2	57.7	68.5	83.5	61.1	59.2	56.2	3,A,iii,b
700126	Gloucester Avenue, London	LM0079	61.2	57.7	68.5	83.5	61.1	59.2	56.2	3,A,iii,b
700127	Gloucester Avenue, London	LM0083	57.1	53.6	67.9	82.9	57.0	55.1	52.1	3,A,iii,b
700128	Regents Park Road, London	LM0083	57.1	53.6	67.9	82.9	57.0	55.1	52.1	3,A,iii,b

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			For operational sound assessment				For construction sound assessment			
			Daytime L _{pAeq,16hr}	Night-time L _{pAeq,8hr}	Arithmetic average of night-time L _{pAFmax,5min}	Highest night-time L _{pAFmax,5min}	Daytime L _{pAeq}	Evening/weekend L _{pAeq}	Night-time L _{pAeq}	
700129	St. Marks Crescent, London	LM0083	57.1	53.6	67.9	82.9	57.0	55.1	52.1	3,A,iii,b
700150	Hartland Road, London	LM0063	59.4	57.7	66.9	80.3	59.3	57.6	56.2	1,A,iii,b
700268	Bridge Approach, London	LM0079	61.2	57.7	68.5	83.5	61.1	59.2	56.2	3,A,ii,b
700446	Adelaide Road, London	LM0079	61.2	57.7	68.5	83.5	61.1	59.2	56.2	3,A,iii,b
700447	King Henrys Road, London	LM0084	56.2	52.7	62.0	77.0	56.1	54.2	51.2	1,A,ii,b
700448	King Henrys Road, London	LM0084	56.2	52.7	62.0	77.0	56.1	54.2	51.2	1,A,i,a
700449	King Henrys Road, London	LM0084	56.2	52.7	62.0	77.0	56.1	54.2	51.2	1,A,ii,b
700450	King Henrys Road, London	LM0084	56.2	52.7	62.0	77.0	56.1	54.2	51.2	1,A,ii,b
700451	Primrose Hill Road, London	LM0084	56.2	52.7	62.0	77.0	56.1	54.2	51.2	1,A,iii,b
700452	Primrose Hill Road, London	LM1312	64.0	57.6	74.6	89.6	64.0	59.2	56.2	3,D,iii,b
700453	Eton Road, London	LM1312	53.7	50.1	74.6	89.6	53.5	51.7	49.9	3,C,iii,b
700454	Beaumont Walk, London	LM1312	59.1	55.5	74.6	89.6	58.9	57.1	54.1	3,C,ii,b
700455	Adelaide Road, London	LM1312	70.2	66.7	74.6	89.6	70.0	68.2	65.2	3,A,ii,b
700456	Adelaide Road, London	LM0079	61.2	57.7	68.5	83.5	61.1	59.2	56.2	3,A,iii,b
700459	Alexandra Road, London	LM1401	54.9	46.8	65.4	70.1	55.5	52.6	46.8	4,A,ii,b
700489	Loudoun Road, London	LM1401	54.9	46.8	65.4	70.1	55.5	52.6	46.8	4,A,ii,b

Assessment location ID	Area Represented	Measurement location	Existing baseline sound level (dB)							Data source coding
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			Daytime L _{pAeq,16hr}	Night-time L _{pAeq,8hr}	Arithmetic average of night-time L _{pAFmax,5min}	Highest night-time L _{pAFmax,5min}	Daytime L _{pAeq}	Evening/weekend L _{pAeq}	Night-time L _{pAeq}	
700494	Alexandra Place, London	LM1401	54.9	46.8	65.4	70.1	55.5	52.6	46.8	4,A,ii,b
700495	Loudoun Road, Kilburn	LM1401	54.9	46.8	65.4	70.1	55.5	52.6	46.8	4,A,ii,b
700496	Hilgrove Road, London	LM1401	54.9	46.8	65.4	70.1	55.5	52.6	46.8	4,A,iii,b
700497	Belsize Road, London	LM1401	54.9	46.8	65.4	70.1	55.5	52.6	46.8	4,A,iii,b
700498	Langtry Walk, London	LM1401	54.9	46.8	65.4	70.1	55.5	52.6	46.8	4,A,ii,b
700499	Ainsworth Way, London	LM1401	54.9	46.8	65.4	70.1	55.5	52.6	46.8	4,A,ii,b
709500	Alexandra Place, London	LM1401	54.9	46.8	65.4	70.1	55.5	52.6	46.8	4,A,i,a
709501	Boundary Road, London	LM1401	54.9	46.8	65.4	70.1	55.5	52.6	46.8	4,A,i,a
709507	Boundary Road, London	LM1401	54.9	46.8	65.4	70.1	55.5	52.6	46.8	4,A,ii,b
720144	Langtry Walk, London	LM1401	54.9	46.8	65.4	70.1	55.5	52.6	46.8	4,A,iii,b
720145	Loudoun Road, London	LM1401	54.9	46.8	65.4	70.1	55.5	52.6	46.8	4,A,iii,b
720146	Loudoun Road, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720147	Boundary Road, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720148	Dorman Way, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b

Assessment location ID	Area Represented	Measurement location	Existing baseline sound level (dB)							Data source coding
			For operational sound assessment				For construction sound assessment			
			Daytime L _{pAeq,16hr}	Night-time L _{pAeq,8hr}	Arithmetic average of night-time L _{pAFmax,5min}	Highest night-time L _{pAFmax,5min}	Daytime L _{pAeq}	Evening/weekend L _{pAeq}	Night-time L _{pAeq}	
720149	Dorman Way, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720150	Loudoun Road, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720151	Boundary Road, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720152	Boundary Road, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720153	Rowley Way, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720154	Rowley Way, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720155	Loudoun Road, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720156	Langtry Walk, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720157	Dorman Way, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720158	Alexandra Road, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b

Assessment location ID	Area Represented	Measurement location	Existing baseline sound level (dB)							Data source coding
			For operational sound assessment				For construction sound assessment			
			Daytime L _{pAeq,16hr}	Night-time L _{pAeq,8hr}	Arithmetic average of night-time L _{pAFmax,5min}	Highest night-time L _{pAFmax,5min}	Daytime L _{pAeq}	Evening/weekend L _{pAeq}	Night-time L _{pAeq}	
720159	Hilgrove Road, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720160	Goldhurst Terrace, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720161	Belsize Road, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720162	Belsize Road, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720163	Belsize Road, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720164	Belsize Road, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720165	Fairfax Road, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720166	Fairhazel Gardens, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720167	Hilgrove Road, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720168	Ainsworth Way, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b

Assessment location ID	Area Represented	Measurement location	Existing baseline sound level (dB)							Data source coding
			For operational sound assessment				For construction sound assessment			
			Daytime L _{pAeq,16hr}	Night-time L _{pAeq,8hr}	Arithmetic average of night-time L _{pAFmax,5min}	Highest night-time L _{pAFmax,5min}	Daytime L _{pAeq}	Evening/weekend L _{pAeq}	Night-time L _{pAeq}	
720169	Ainsworth Way, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720170	Alexandra Road, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720171	Fairhazel Gardens, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720172	Fellows Road, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720173	Provost Road, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720174	Eton Avenue, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720175	King Henrys Road, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720176	Oppidans Road, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720177	Steeles Road, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720178	Regents Park Road, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b

Assessment location ID	Area Represented	Measurement location	Existing baseline sound level (dB)							Data source coding
			For operational sound assessment				For construction sound assessment			
			Daytime L _{pAeq,16hr}	Night-time L _{pAeq,8hr}	Arithmetic average of night-time L _{pAFmax,5min}	Highest night-time L _{pAFmax,5min}	Daytime L _{pAeq}	Evening/weekend L _{pAeq}	Night-time L _{pAeq}	
720179	King Henrys Road, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720180	Meadowbank, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720181	Oppidans Road, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720182	Meadowbank, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720183	Elsworthy Road, London	LM0082	61.6	58.1	68.7	83.7	61.4	59.5	56.5	3,A,iii,b
720184	Fellows Road, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720185	Fellows Road, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720186	Quickwood, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720187	Steeles Road, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720188	Oppidans Road, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720189	Fellows Road, London	LM1312	60.2	56.7	74.6	89.6	60.0	58.2	55.2	3,B,iii,b

Assessment location ID	Area Represented	Measurement location	Existing baseline sound level (dB)							Data source coding
			For operational sound assessment				For construction sound assessment			
			Daytime L _{pAeq,16hr}	Night-time L _{pAeq,8hr}	Arithmetic average of night-time L _{pAFmax,5min}	Highest night-time L _{pAFmax,5min}	Daytime L _{pAeq}	Evening/weekend L _{pAeq}	Night-time L _{pAeq}	
720190	Primrose Hill Road, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720191	Adelaide Road, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720192	King Henrys Road, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720193	Adelaide Road, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720194	Haverstock Hill, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720195	Haverstock Hill, London	LM0075	72.3	70.6	77.2	90.5	72.2	70.5	69.1	3,A,iii,b
720196	Belmont Street, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720197	Harmood Street, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720198	Springfield Road, London	LM1401	54.9	46.8	65.4	70.1	55.5	52.6	46.8	4,A,iii,b
720199	Goldhurst Terrace, London	LM1401	54.9	46.8	65.4	70.1	55.5	52.6	46.8	4,A,iii,b
720200	Alexandra Road, London	LM1401	54.9	46.8	65.4	70.1	55.5	52.6	46.8	4,A,iii,b
720201	Springfield Road, London	LM1401	54.9	46.8	65.4	70.1	55.5	52.6	46.8	4,A,iii,b

Assessment location ID	Area Represented	Measurement location	Existing baseline sound level (dB)							Data source coding
			For operational sound assessment				For construction sound assessment			
			Daytime L _{pAeq,16hr}	Night-time L _{pAeq,8hr}	Arithmetic average of night-time L _{pAFmax,5min}	Highest night-time L _{pAFmax,5min}	Daytime L _{pAeq}	Evening/weekend L _{pAeq}	Night-time L _{pAeq}	
720202	Springfield Road, London	LM1401	54.9	46.8	65.4	70.1	55.5	52.6	46.8	4,A,iii,b
720203	Springfield Road, London	LM1401	54.9	46.8	65.4	70.1	55.5	52.6	46.8	4,A,iii,b
720205	Hilgrove Road, London	LM1401	54.9	46.8	65.4	70.1	55.5	52.6	46.8	4,A,iii,b
720206	Dobson Close, London	LM1401	54.9	46.8	65.4	70.1	55.5	52.6	46.8	4,A,iii,b
720207	Hilgrove Road, London	LM1401	54.9	46.8	65.4	70.1	55.5	52.6	46.8	4,A,iii,b
720208	Belsize Road, London	LM1401	54.9	46.8	65.4	70.1	55.5	52.6	46.8	4,A,iii,b
720209	Belsize Road, London	LM1401	54.9	46.8	65.4	70.1	55.5	52.6	46.8	4,A,iii,b
720210	Fairfax Road, London	LM1401	54.9	46.8	65.4	70.1	55.5	52.6	46.8	4,A,iii,b
720211	Goldhurst Terrace, London	LM1401	54.9	46.8	65.4	70.1	55.5	52.6	46.8	4,A,iii,b
720213	Dobson Close, London	LM1401	54.9	46.8	65.4	70.1	55.5	52.6	46.8	4,A,iii,b
720214	Belsize Road, London	LM1401	54.9	46.8	65.4	70.1	55.5	52.6	46.8	4,A,iii,b
720215	Fairfax Road, London	LM1401	54.9	46.8	65.4	70.1	55.5	52.6	46.8	4,A,iii,b
720216	Fairfax Road, London	LM1401	54.9	46.8	65.4	70.1	55.5	52.6	46.8	4,A,iii,b
720217	Fairhazel Gardens, London	LM1401	54.9	46.8	65.4	70.1	55.5	52.6	46.8	4,A,iii,b
720218	Fairhazel Gardens, London	LM1401	54.9	46.8	65.4	70.1	55.5	52.6	46.8	4,A,iii,b
720221	Steeles Road, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b

Assessment location ID	Area Represented	Measurement location	Existing baseline sound level (dB)							Data source coding
			For operational sound assessment				For construction sound assessment			
			Daytime L _{pAeq,16hr}	Night-time L _{pAeq,8hr}	Arithmetic average of night-time L _{pAFmax,5min}	Highest night-time L _{pAFmax,5min}	Daytime L _{pAeq}	Evening/weekend L _{pAeq}	Night-time L _{pAeq}	
720222	Chalcot Gardens, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720223	Haverstock Hill, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720224	Prince Of Wales Road, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720225	Talacre Road, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720226	Talacre Road, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720227	St. Johns Wood Park, London	LM1401	54.9	46.8	65.4	70.1	55.5	52.6	46.8	4,A,iii,b
720228	Middle Field, London	LM1401	54.9	46.8	65.4	70.1	55.5	52.6	46.8	4,A,iii,b
720229	Clifton Hill, London	LM1401	54.9	46.8	65.4	70.1	55.5	52.6	46.8	4,A,iii,b
720230	Ainsworth Way, London	LM1401	54.9	46.8	65.4	70.1	55.5	52.6	46.8	4,A,iii,b
720231	Boundary Road, London	LM1401	54.9	46.8	65.4	70.1	55.5	52.6	46.8	4,A,iii,b
720232	Rowley Way, London	LM1401	54.9	46.8	65.4	70.1	55.5	52.6	46.8	4,A,iii,b
720233	St. Johns Wood Park, London	LM1401	54.9	46.8	65.4	70.1	55.5	52.6	46.8	4,A,iii,b

Table 2: Data source coding key

Code	Data source type
1	Long-term measurement location
2	Short-term (linked to simultaneous long-term)
3	Short-term (using profile from non-simultaneous long-term)
4	Short-term using standard (National Noise Incidence Study ⁴ or other) 24hr profile
5	Specific validated prediction
6	Predictions from other sources (Department of Environment, Food and Rural Affairs (Defra) noise maps ⁵ , etc.)
7	Generic levels

Code	Corrections applied
A	Data from above source applied directly
B	Correction applied for screening
C	Correction applied for distance from source
D	Minimum level cut-off applied

Code	Distance from measurement
i	Data applied from a measurement at or very close to the assessment location.
ii	Data applied from a local measurement location at a greater distance but noted to have equivalent acoustic climate.
iii	Data applied from a distant measurement location where sound levels would be expected to be similar.

Code	Uncertainty
a	Data are considered highly representative of the prevailing sound climate.
b	Data are considered representative of the prevailing sound climate, but variations in measured levels indicate that there may be a higher degree of uncertainty than for (a).
c	Data are considered to be an estimate of the sound climate, (e.g. taken from Defra noise maps, etc.).

⁴ Building Research Establishment (2002), *National Noise Incidence Study*, 2000/2001.

⁵ Defra; Noise Mapping England; <http://services.defra.gov.uk/wps/portal/noise/>; Accessed: 26 July 2013.

3.3 Future baseline methodology

Construction

- 3.3.1 The assessment of noise from construction activities assumes a baseline year of 2017. As a conservative assumption, it has been assumed that no change in baseline sound levels will occur between the existing baseline (2012/13) and the future baseline year of 2017.
- 3.3.2 Due to the duration of the construction work and as the precise timing of the highest sound levels would be different in each location, using baseline sound levels for 2017 as the start of the construction period, provides a reasonable worst case assessment.
- 3.3.3 The assessment of construction traffic is based on future baseline traffic flows for 2021, as a year representative of the middle of the construction period.

Operation

- 3.3.4 There is potential for future baseline sound levels for operation (2026) to change when compared to the existing baseline sound levels (2012) as a result of changes in baseline sound sources.
- 3.3.5 In the vast majority of cases where change might occur it is expected that baseline sound levels will increase at assessment locations due to increases in vehicle movements on roads. It is therefore considered that the use of the 2012 baseline levels in the operational assessment will result in a worst case assessment of the impact of changes in the future baseline sound levels in the majority of locations.
- 3.3.6 Therefore for the purposes of this assessment future baseline levels have been assumed to be identical to those identified in Table 1 of this appendix for 2012.
- 3.3.7 In addition, based on available road traffic information a screening exercise has been undertaken to identify any areas in which a non-temporary reduction in baseline sound level might be likely. Where reductions in baseline sound level have been identified a further screening assessment has been completed to identify if these changes would be likely to materially affect the operational sound assessment.
- 3.3.8 The screening assessment has not identified any locations in this area where a decrease in future baseline (2026), compared to existing baseline (2012), is likely to materially affect the operational sound assessment.

4 References

British Standards Institute (BSi) (1997), *BS4142 Method for rating industrial noise affecting mixed residential and industrial areas*, BSi.

Building Research Establishment (2002), *National Noise Incidence Study*, 2000/2001.

Defra; Noise Mapping England; <http://services.defra.gov.uk/wps/portal/noise/>; Accessed: 26 July 2013.